Excavation of foundation for the masonry dam was under progress.

1201. In addition to the above projects, certain other projects namely Dharma Reservoir project, Kolchi Weir scheme, Ramanahalli scheme, Areshankar Tank, Kalaskop Tank, Kanakanala project, Hathikoni project, and Jambadahalla project were under various stages of progress during the year.

1202. Major projects like Harangi project, Upper Krishna project and Bhima project, were under various stages of investigation.

1203. Detailed plans and estimates were prepared for the following works:—

1. Harinala Reservoir project (Belgaum District)
2. Kadur Tank project (Raichur District)
3. Kolhar Tank project (Bijapur District)

1204. Preliminary reports had been prepared in respect of the following schemes:—

1. Rangasamudra Tank (Bijapur District)
2. Anjanal Tank project do
3. Almol Tank project do
4. Setti Nalla Scheme (Belgaum District)

1205. *Mysore Engineering Research Station*:—The development of the Research Station to cope with the increased demand for research in the evolution of safe and economical structures was taken up and accordingly the undermentioned existing branches were strengthened.

1206. (1) Hydraulics (2) Soil Mechanics including Chemical and Meteorological sections and (3) Material Testing. Besides, a Road Research wing was newly added.

1207. Studies on the following, sponsored by the Government of India, were also continued in the Research Station:

1208. (1) Canal lining, (2) Standardisation of the use of Surki and other puzzolanic materials and (3) Restriction of evaporation from open water storages using Cetyl-Alchohol.

(iii) Irrigation and Public Health.

1209. *Irrigation Works.*—Irrigation works comprise (i) Channel Irrigation drawn from anecuts or dams constructed across perennial rivers (ii) Tank Irrigation and

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(iii) Lift Irrigation. All the relative works costing more than Rs. 10 lakhs were under the control of the Chief Engineer, Irrigation Projects.

1210. There were about 37,300 tanks commanding a total atchkat of 10·89 lakhs of acres covering about 64·7 per cent of the total irrigable area of 17·4 lakhs of acres of the State. With a view to speeding up the execution of all irrigation works and utilising fully the irrigation potentiality thereunder and increasing the food production in the State, a special scheme namely Special Minor Irrigation Scheme, was sanctioned during the latter part of 1957 and works were taken up as per the sanctioned programmes year after year treating them as Plan Works.

1211. The Irrigation works under the control of the Chief Engineer consisted of mainly two categories namely (i) Medium Irrigation and (ii) Minor Irrigation.

Medium Irrigation.

1212. Eight schemes carried over from the first plan were included under this head. Of these the Lakhanpur Bhandara was not in progress as the beneficiaries were not agreeable to utilise irrigation benefits. Of the remaining, two works were completed and two were nearing completion and the rest were in different stages of progress, bringing the irrigation potential created to 6,264 acres, under the first seven schemes.

1213. Thirty-two works which were outside the Plan were brought into the Plan during the year. Out of these, six works were not taken up as they were found either not feasible or required further investigation. Of the remaining 2,616 works were expected to be completed during 1960-61 and the rest will be spill over schemes for the Third Plan. The total potential under all these works is 24,287 acres of which 13,528 acres will be irrigated under the 16 projects which were expected to be completed during 1960-61.

1214. The expenditure during the year on all the medium projects in this zone stood at Rs. 13·90 lakhs.

Minor Irrigation.

1215. The following are the important classifications of works under this Scheme :—

(1) Restoration of tanks.
(2) Construction of new tanks, pick-ups, Bhandaras, anecuts and improving the existing ones.

(3) Special Minor Irrigation Works.
(4) Flood control and drainage works.
(5) Desilting and reclamation works.

1216. Against the provision of Rs. 580·5 lakhs for the Second Plan period, the expenditure to end of the year stood at 524·69 lakhs. The expenditure on minor irrigation works during the year stood at Rs. 144·63 lakhs against the plan provision of Rs. 135·68 lakhs. The reclamation of marshy lands and irrigable lands submerged under the water spread of tanks present a serious problem. As an experimental measure, bunding in the upper margin of tanks to confine the water spread within a limited area and releasing the bed for cultivation, was taken up in respect of Hebbal Tank (Bangalore North Taluk) and Sulebele tank (Hoskote Taluk).

1217. *National Rural Water Supply and Drainage.*—These Schemes were meant to provide protected water supply and sanitation facilities in rural areas of the State. The Central Government bears 50 per cent of the cost as grant-in-aid and the remaining being met equally by the State Government and the Village Panchayats. The scheme at present was limited to a single village or a group of villages with a population up to 5,000. The Scheme was taken in two batches in the Old Mysore Area. The first batch consisted of water supply to 75 villages in Hassan, Tumkur, Shimoga and Kolar Districts. It was expected that all the works except Nagur in Shimoga District, would be completed by the end of the year.

1218. The expenditure incurred up to end of the year was Rs. 23·41 lakhs, as against an aggregate estimated cost of Rs. 29·90 lakhs.

1219. The Second batch of works comprising 97 villages in Bellary, Chikkamagalur, Chitradurga, Bangalore, Mandya and Mysore Districts, these works were expected to be completed during the year 1962-63. A sum of Rs. 8·65 lakhs was spent during the year as against an approximate estimate of Rs. 41·89 lakhs.

1220. *National Water Supply and Sanitation Programme.*—Under the national water supply and sanitation programme, 18 water supply and six drainage schemes were included, which also carry loan assistance from the

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Government of India. Of these, schemes in respect of the towns, Tumkur, Mandya, Holenarasipur and Thirthahalli, were completed and put into service. Twelve of the remaining schemes were physically completed.

1221. The estimated cost of all the 18 water supply schemes stood roughly at Rs. 362·46 lakhs, against which the expenditure incurred up to end of the year was Rs. 154·44 lakhs.

Drainage Schemes.

1222. Out of six schemes, one was converted into an underground scheme against the original surface scheme sanctioned for Byadgi and out of the remaining five, the Mysore City underground drainage work was being executed by the Mysore City Municipality. The Kolar underground drainage was finalised.

1223. The three remaining works relating to Davanagere, Soundatti Yellamma and Bailhongal towns, were under progress during the year.

1224. The estimated cost of all the six schemes stood roughly at Rs. 62.34 lakhs, against which the expenditure to end of the year amounted to Rs. 18·59 lakhs.

State Schemes

1225. *Water Supply.*—Out of 76 schemes, 29 were completed and in respect of 46 works, the work was in progress during the year.

1226. *Drainage.*—Out of the 16 underground drainage schemes, work relating to Nyamathi, Shikaripur, Pandavapura and Mandya towns were completed and the rest were in progress.

1227. The financial aspect of both the 76 water supply and 16 drainage schemes stood as follows :—

Estimated cost	...	Rs. 1,038·65 lakhs.
Amount spent	...	Rs. 539·88 lakhs.

1228. *Other Fresh Schemes.*—Nineteen water supply and nine drainage schemes were included under this Scheme. Of the 19 schemes, 9 water supply schemes were under progress and of the 9 underground drainage schemes, only two namely Hubli and Dharwar, were under progress, the former being executed by its municipality.

1229. The estimated cost of the above nineteen water supply schemes and nine drainage works will be roughly 467·41 lakhs against which the expenditure incurred up to end of the year was Rs. 22·04 lakhs.

1230. *Investigation and Preparation of Irrigation Projects.*—Two Irrigation Investigation Circles with eight divisions and twenty-seven sub-divisions were sanctioned for a period of three years, by Government on 29th January 1959.

1231. The Minor Irrigation Investigation Divisions conducted detailed investigation of medium and minor irrigation works.

1232. The Major Investigation Division, Mysore was in charge of investigation of a single major project, *viz.*, Harangi project in Coorg with 7,800 M. cft. capacity to irrigate about 55,000 acres in Coorg, Mysore and Hassan Districts. The investigations and surveys of dam site were completed. The right and the left bank channels were aligned for about 35 and 55 miles respectively. Capacity contours were surveyed and the statement of areas coming under submersion was prepared.

1233. The Major Investigation Division, Dharwar, conducted detailed investigations and prepared plans and estimates for three projects. In addition, preliminary reports were also prepared for four irrigation projects.

1234. The problem of Flood Control in Mysore State received more attention in recent years due to disastrous floods in various rivers, experienced during the year 1954. The areas affected by floods to an appreciable extent are coastal districts of North and South Kanara, the districts of Belgaum, Shimoga, Mysore, Gulbarga and Raichur. Flood Control.

1235. The grant allotted for the flood control schemes during the year was Rs. 1·5 lakhs out of whichan expenditure of Rs. 0·20 lakhs was incurred during the year. Sanction of Government was accorded for the formation of a sub-division for the Northern zone of the Mysore State for investigations of flood control schemes, called the 'Flood Control Sub-Division' and stationed at Dharwar, started working from 23rd October 1952.

1236. The sub-division was investigating the following schemes:—

(1) Providing protection from flood ravages to towns and villages situated on the banks of (i) Ghataprabha, (ii) Malaprabha (iii) Krishna, (iv) Varada and (v) Don rivers.

(2) Khar land and salt water exclusion schemes in North and South Kanara Districts.

(3) Prevention from Sea Erosion of Costal towns

1237. Most of these schemes were either in the initial stage of investigations or were being taken up for investigation.

(iv) Construction of Hydro-Electric Projects.

Linganamakki Main Dam.

1238. *Sharavathi Valley Hydro-Electric Project.*—A total quantity of 2,48,600 units of 100 Cft. of excavation for foundation was done during the year and on the right bank it was 3,570 ft. The work was started during October 1959. The total volume of construction completed was 60,564 units of 100 Cft. and the quantity of mortar ground supplied was about 6,070 units. The progress of construction of Dam during the year was 65,268 units of rubble masonry in cement mortar and 12,141 units in surki mortar, forming 17·5 per cent of the total quantity of masonry to be laid for the completion of the first stage. The Core drilling along the Dam was also completed.

1239. The extent of Hiduvali lands that had to be acquired for the project was 8,902 acres. A sum of Rs. 9,59,061 was paid for acquisition of about 912 acres of various types of lands as compensation. Ninety-eight families were allotted lands for cultivation and 2,125 acres of forest land were released for allotment.

Talakalale Dam.

1240. The work of excavation for foundations of the dam was continued and 5,978 units of 100 Cft. of soils and rock were excavated making a total of 79,752 units. A quantity of 14,126 units of masonry and concrete was laid during the year bringing the total to 15,650 units. A quantity of about 94,940 units of surki mortar was grounded and supplied.

Power Channel.

1241. About 76,186 units of excavation in soils and rock for the power channel, was done during the year bringing the total to 2,25,039 units.

1242. Outlay on the works at site under various items during the year was Rs. 14,77,866 as against the estimated cost of Rs. 24,00,000. The total outlay up-to-date was Rs. 17,81,396.